

Applicant : Kenichiro Kobayashi et al.  
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In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (original) A method for direct image pick-up of a particular granular speck pattern generated by reflecting light of a laser beam depending on a degree of roughness of the surface of an object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with the laser beam;

directly picking up said granular speck pattern in a relatively well lighted environment using a lensless video camera having a CCD (Charge Coupled Device) element incorporated in said video camera; and

providing a shielding tube coupled to said camera to shield extraneous light rays.

2. (canceled)

3. (previously presented) A method for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with the laser beam;

directly picking up said granular speck pattern in a relatively well lighted environment using a lensless video camera having a CCD element incorporated in said video camera; and

providing a shielding tube coupled to said camera to shield extraneous light rays.

4-5. (canceled)

6. (previously presented) A method for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending

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on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with a laser beam;  
directly picking up said granular speck pattern in a relatively well lighted environment using a lensless digital camera having a CCD element incorporated in said camera; and  
providing a shielding tube coupled to said camera to shield extraneous light rays.

7. (canceled)

8. (original) The method of claim 1, further including:

moving the object;

measuring an amount which the object has moved;

calculating the amount of movement on the basis of movement of the granular speck pattern with respect to an index of the granular speck pattern; and

displaying a result of the calculation as a numerical value of the measured amount of movement.

9-10. (canceled)

11. (original) The method of claim 3, further including:

detecting a granular speck pattern generated by the reflecting laser beam as an index;

calculating an amount of movement of the object on the basis of movement of the granular speck pattern with respect to said index; and

displaying a result of the calculation as a numerical value of the measured amount of movement.

12-13. (canceled)

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14. (previously presented) A method for direct image pick-up of a particular granular speck pattern generated by reflecting light of a laser beam depending on a degree of roughness of the surface of an object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with the laser beam;  
directly picking up said granular speck pattern in a relatively well lighted environment using a lensless camera; and  
providing a shielding tube coupled to said camera to shield extraneous light rays.

15. (canceled)

16. (previously presented) A method for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with the laser beam;  
directly picking up said granular speck pattern in a relatively well lighted environment using a lensless camera; and  
providing a shielding tube coupled to said camera to shield extraneous light rays.

17. (previously presented) A method for direct image pick-up of a particular granular speck pattern generated by the transmitted light of a laser beam diffusively reflecting depending on a degree of roughness of the laser beam irradiated onto the surface of an object to be inspected or shapes of fine ingredients constituting said object to be inspected, said method comprising the steps of:

irradiating said object to be inspected with a laser beam;  
directly picking up said granular speck pattern in a relatively well lighted environment using a lensless camera; and  
providing a shielding tube coupled to said camera to shield extraneous light rays.